A GLOBAL COMPLIANCE EXTENSION FOR ELECTRIC UTILITY STEAM GENERATING UNITS – LEGAL AND POLICY BASIS

September 4, 2003

Robert A. Wyman Claudia M. O'Brien Jeffrey R. Hamlin Latham & Watkins 555 11th Street, N.W. Suite 1000 Washington, D.C. 20004

TABLE OF CONTENTS

			<u>Page</u>
A.	Intro	oduction	1
В.		A Compliance Term Greater Than Three Years Is Warranted for Existing Affected Electricity Generators	
	1.	Compliance With The Proposed MACT Floor For Mercury Emissions Within Three Years Is Practically Impossible	2
	2.	An Extended Compliance Term Will Result In Greater Environmental Benefits At Lower Costs Due To Coordination of Control Technologies That Facilitate Compliance With Proposed Utility MACT Standards And Future PM 2.5 RTR Standards	5
C.	EPA Has Authority Under § 112(n) Of The Clean Air Act To Set A Reasonable Compliance Deadline For Regulations Limiting HAP Emissions From Electricity Generators		7
D.	Alternatively, Precedent Exists For An Automatic, Global One-Year Compliance Extension.		9
E	Cone	clusion	10

A GLOBAL COMPLIANCE EXTENSION FOR ELECTRIC UTILITY STEAM GENERATING UNITS – LEGAL AND POLICY BASIS

A. Introduction

Section 112(n)(1)(A) requires the Administrator of EPA to perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by electric utility steam generating units of pollutants listed under subsection (b) of [§ 112] after imposition of the other requirements of [§ 112]." The Administrator is then required to report the results of the study to Congress.² Section 112(n)(1)(A) further requires the Administrator to regulate such emissions if the Administrator finds that regulation is appropriate and necessary after considering the results of the study.³

Pursuant to § 112(n)(1)(A), EPA performed the required study and issued the Utility Air Toxics Final Report to Congress in February of 1998.⁴ After collecting additional data, EPA issued a regulatory finding under CAA 112(n)(1)(A) that regulation of HAP emissions from coal-fired electric utility steam generating units under § 112 is appropriate and necessary.⁵ The following dates were arrived at by agreement and incorporated into EPA's decision to regulate mercury from coal-fired units: (i) EPA is to propose regulations by December 15, 2003; and (ii) EPA is to promulgate regulations by December 15, 2004.⁶ It has been generally presumed that affected existing sources must comply with the promulgated regulations by approximately December 15, 2007, in conformance with the general three-year compliance schedule mandated for existing sources in CAA § 112(i)(3)(A).

This white paper considers whether EPA has the authority to establish a compliance term for Utility MACT that exceeds three years, either by establishing a reasonable compliance deadline pursuant to § 112(n) or by granting an automatic, global one-year extension under § 112(i)(3)(B). It concludes that, under the unique framework of § 112(n), EPA does have authority to establish a reasonable compliance term for electricity generators that is consonant

³ See id.

DC\613598.4

¹ See 42 U.S.C. § 7412(n)(1)(A) (2003).

² See id.

See EPA, "Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units – Final Report to Congress" EPA-453/R-98-004a (Feb. 1998).

See 65 Fed. Reg. 79825 (Dec. 20, 2000) ("Regulatory Finding"). Industry submits that EPA's Regulatory Finding provides the factual predicate under § 112(n)(1)(A) only for the regulation of mercury because, although EPA noted that a handful of other HAPs may pose a potential concern to public health, EPA based its regulatory finding exclusively on the potential hazards of mercury emissions from coal-fired units. EPA made no regulatory finding with respect to certain HAP metals, acid gases and organic HAPs, but noted that emissions of these substances "may be evaluated further during the regulatory process." See id. at 79827-28.

See Recommendations for the Utility Air Toxics MACT: Final Working Group Report 1, 2 (Oct. 2002).

with § 112(n)'s purpose. The white paper also concludes that EPA has authority under § 112(i)(3)(B) to grant an automatic, global one-year extension as it has in the past.

B. A Compliance Term Greater Than Three Years Is Warranted for Existing Affected Electricity Generators

- 1. Compliance With The Proposed MACT Floor For Mercury Emissions Within Three Years Is Practically Impossible.
 - a. Electricity Generators Need More Than 3 Years To Install The Controls Necessary For Compliance With Proposed Utility MACT Standards.

A compliance deadline greater than three years is necessary because, industry wide, power plants cannot possibly install and implement the technology they need to comply with industry's proposed MACT floor within thirty-six months. Industry groups have proposed a Utility MACT floor for mercury emissions stated as either a stack limit of 2.2 lb/tBtu or an overall reduction of 73 percent for sources burning bituminous coal. A stack limit of 4.2 lb/tBtu and an overall reduction of 31 percent has been proposed for sources burning subbituminous coal. To achieve these standards, many, if not most, coal-fired electricity generators will have to install either a flue gas desulfurization ("FGD") control or an activated carbon injection ("ACI") control, both of which can take extensive time to install and implement.

The installation of one FGD system requires, at a minimum, a total of 36-48 months. During the first six to twelve months, facilities must select a particular technology and establish the appropriate criteria for design. During the next 12 months, the system must be designed and engineered. In addition, 18-24 months is required for construction and start-up of the new system, bringing total time required for installation to 36 to 48 months. Time required for installation increases as the number of units at a given facility requiring FGDs increases.

Assuming that all affected electricity generators will begin the process of retrofitting their units with FGDs the day Utility MACT is scheduled to become final – December 15, 2004 – theoretically sources retrofitting only one unit could do so within a three-year window for compliance. A three-year window, however, is impracticable industry-wide because a 36-month compliance window and the 36-month time requirement for installation leave little, if any, room for staggering. Given that hundreds of the 1100 affected sources will necessarily be installing FGDs on the same timeline, a three-year compliance window would require that all retrofitted units be taken offline during November and December 2007, the result of which would be extensive power outages during the 2007 holiday season.

Installation of a FGD system could take even longer than 36 to 48 months. If facilities must construct landfills for disposal of FGD waste, permitting of such landfills could take up to 5 years. Put simply, sources need a bare minimum of 36 months and may need 60 months or longer to install and implement FGD controls, assuming no permitting delays. If EPA

_

⁷ See Recommendations for the Utility Air Toxics MACT: Final Working Group Report at 9.

⁸ *Id*.

imposes a compliance window of only three years for Utility MACT, affected sources will be precluded from using FGD to reduce mercury emissions.

Similarly, while installation of ACI alone may be accomplished in less than three years, installation of ACI with COHPAC fabric filters ("FFs") will take longer. As EPA is aware, sources with existing hot-side ESPs will be *required* to retrofit with a COHPAC FF to render ACI functional. Even sources with cold-side ESPs may well need to install COHPAC FFs to ensure compliance. The available testing demonstrates that an ACI-ESP combination can achieve only approximately 60% removal. For sources that need greater removal efficiencies, an ACI-COHPAC control combination (which can achieve approximately 80% removal) will be required.

Moreover, an ACI-COHPAC control combination may be necessary for other reasons. For example, use of ACI with the existing ESP may cause opacity violations, such that additional PM control is necessary to comply with existing permit limits. Further, to the extent that a source reuses – or intends to reuse – its fly ash as concrete filler, a COHPAC is a necessity to prevent carbon contamination that renders the ash unusable. Alternatively, sources that currently reuse fly ash would be required to landfill their ash – at significant expense and with possible landfill permitting delays. In sum, if sources use ACI, many will need to use them in combination with COHPAC FFs to maximize emissions reductions, comply with opacity limits or minimize inefficiencies associated with contaminated fly ash. These sources simply will need more time to comply.

Thus, whether a sources complies using an FGD or ACI, more than three years is likely to be needed to complete the necessary control installations. A three-year compliance window becomes especially problematic in light of the unique requirements for financing imposed on many utilities. These control technologies are very expensive and require financing. However, public utility commissions typically require that utilities have a legal obligation to install controls before the utilities are allowed to finance the control technologies. The inability of regulated sources to obtain much-needed financing until December 15, 2004 seriously hinders their ability to act early in an attempt to meet the December 15, 2007 deadline.

b. An Already Impracticable Three-Year Compliance Window Is Even More Problematic In Light Of Probable Materials and Craft Labor Shortages

EPA is further warranted in setting a compliance deadline for electricity generators beyond three years because the ability of sources to comply even within the above-mentioned 4 to 5-year window is questionable due to shortages that would result from the large number of facilities requiring controls compared to the availability of raw materials, craft labor and construction equipment such as cranes. EPA justified its automatic grant of a global, one-year extension on such grounds in its final rule establishing NESHAP for Marine Tank Vessel Loading Operations ("Marine Tank MACT"). In the preamble to the final rule, EPA explained:

_

⁹ See 60 Fed. Reg. 48392 (Sept. 19, 1995).

The EPA shall allow existing sources regulated solely under § 112 four years to be in full compliance with the emission control requirements promulgated under section 112.... Commenters stated that standards containing similar compliance dates for a large number of sources would result in numerous facilities competing for a limited number of experienced contractors in order to meet the standards at the same time. Commenters also stated that many sources would require more than 3 years to install the required control equipment given the limited number of contractors experienced in installing control equipment in marine loading facilities and the lead time needed to meet permitting and safety requirements from permitting authorities and the U.S. Coast Guard. The Agency agrees with the commenters that many MACT sources would probably require 1-year waivers if there was a 3-year compliance date for MACT sources in the final rule Therefore, the Agency believes that the sources controlled under section 112 that are not controlled under section 183(f) should automatically receive a waiver of 1 year that will allow a total of four years from September 19, 1995 to comply with the MACT emission reduction requirements.¹⁰

Similar concerns militate in favor of a window for compliance that exceeds three years for Utility MACT. Utility MACT will affect approximately 1100 units, most of which will need to be retrofitted to meet the new emissions standards. This large number of facilities will be competing nationwide for limited resources and materials, and for engineering consultants, equipment vendors, experienced construction contractors, financial institutions and other critical suppliers to meet the three year compliance deadline. Such demand will cause increased costs for materials and services, and these excessive and unnecessary costs will be borne ultimately by residential, industrial, and commercial consumers of electricity – the very ones, as discussed below, that § 112(n) was intended to protect.

A shortage of materials and manpower may also threaten reliability because existing coal-fired electricity generators comprise well over half of the nation's base load energy supply. The sheer number of boilers that must be brought off-line for scheduled outages in order to install the requisite technology¹¹ within three years may pose a risk to electricity reliability. The shortage issues caused by a three-year compliance window will be exacerbated because it is doubtful that any of the regulated boilers can install controls in the first year unless they install ACI without COHPAC. The compliance window will be squeezed even tighter such that as many as 1000 boilers may need to be taken offline in Years Two and Three for the installation of emissions controls, a schedule that may well threaten reliability.

Moreover, the shortage of laborers (and attendant increase in costs) may force electricity generators to forego routine maintenance and repairs in order to install control technology within the three-year compliance window. During normal outage periods, a finite pool of laborers is employed throughout the nation to conduct routine maintenance and repairs because much of the work can only be accomplished while units are off-line. The imposition of

¹⁰ *Id.* at 48392.

Due to flue gas temperatures exceeding 600° F, installation of a FGD system and an ACI system can only take place while a unit is off-line.

a three-year compliance window for Utility MACT may draw down labor supplies during normal outage seasons such that welders and boilermakers are simply unavailable to perform routine maintenance and repairs. Thus, reliability will be further compromised because power plants that are in disrepair or inadequately maintained risk not being able to provide uninterrupted supplies of energy.

In addition, shortages in manpower and materials may threaten reliability by forcing sources to delay compliance toward the last few outages scheduled before the compliance window expires. It is critical that affected sources stagger retrofits through the compliance window – doing so ensures sufficient capacity during normal outages. If shortages of labor and materials during the early outage seasons force power plants to complete numerous retrofits during the last few outage seasons, those plants may not be able to provide adequate supplies of electricity.

Finally, shortages related to the purchase of power caused by a three-year compliance window likely will threaten reliability. Installation of control technology pursuant to Utility MACT will require an extension of a unit's outage time. To meet demand during such outages, many utilities will have to purchase power. A three year compliance window will increase demand for purchase power, in which case two results may follow: (i) demand will put upward pressure on costs associated with the purchase of power and these costs will be passed on to consumers of electricity and (ii) sufficient power may not be available on the purchase-power market to meet demand, which may preclude sources from meeting demands for power. To the extent EPA extends the compliance window beyond three years, EPA will reduce the demand on purchase power, which will result in reduced cost increases to consumers and reduced likelihood that sources will not be able to meet demand.

> 2. An Extended Compliance Term Will Result In Greater Environmental Benefits At Lower Costs Due To Coordination of Control Technologies That Facilitate Compliance With Proposed Utility MACT Standards And Future PM_{2.5} RTR Standards.

In addition to the foregoing reasons, EPA should establish a compliance window greater than three years because doing so will afford greater cost savings and environmental benefits associated with coordinating compliance with Utility MACT and a PM_{2.5} Regional Transport Rule ("RTR"). EPA established precedent for extending compliance terms on such grounds when it granted an eight-year compliance window for all kraft mills in the Pulp & Paper Cluster Rule. 12

In that rule-making, EPA declined to impose a three year compliance window on grounds that it would prevent the achievements of greater cost savings and environmental benefits associated with the combined use of two control technologies: brownstock washers and oxygen delignification units ("OD"). ¹³ EPA established a five-year global extension to

13

See 63 Fed. Reg. 18504 (Apr. 15, 1998).

See id. at 18521-22 (adopting rationale stated in proposed rule for five-year extension of compliance term).

encourage sources to install ODs, which reduce the need for chlorinated chemical application in the bleaching process resulting in reduced loadings of chlorinated pollutants in the air and water. To gain the maximum benefit, sources would have had to upgrade brownstock washers and install new gas collection systems, but both could not be completed within three years. If EPA had required sources to spend time and money to retrofit their washers with a vent gas collection system to meet the three-year deadline, they would have likely postponed or foregone installation of OD later. Explaining why a five-year extension was warranted, EPA stated:

EPA . . . believes that the cluster rule will ultimately result in lower overall compliance costs, while still providing environmental and human health protection. However, EPA recognizes the unique compliance and timing issues that the cluster rule may create. EPA has identified one situation that may warrant additional compliance time to fully realize the goals of this rule. EPA is inclined to agree . . . that additional time is warranted for brownstock washers and oxygen delignification units EPA believes the additional time would ensure that the maximum degree of overall multi-media pollution reduction is achieved, without requiring unnecessary compliance costs. . . . EPA encourages the implementation of these pollution prevention technologies, but recognizes the evaluation and implementation of these technologies would add time and expense to the compliance activities for these sources. ¹⁶

EPA further noted that sources would be complying with air and water rules essentially at the same time such that many of the changes required to implement the water requirements would have to be considered before control of air emissions could be implemented.¹⁷ EPA concluded that an eight-year compliance window would "allow sufficient time for a complete evaluation of all pollution control options." Notably, EPA questioned seriously "whether imposition of a standard that result[ed] in foregoing substantial cross-media environmental benefits could be MACT."

A similar situation exists in Utility MACT. A compliance term greater than three years is warranted for Utility MACT due to the co-benefits associated with technologies useful for compliance with Utility MACT and $PM_{2.5}$ RTR, namely the use of FGD to enhance control of mercury pursuant to Utility MACT and to enhance control of sulfur dioxide ("SO₂") pursuant to the $PM_{2.5}$ RTR. Currently, Utility MACT is presumed to require compliance by approximately December 15, 2007; the $PM_{2.5}$ RTR will probably require compliance two to five

¹⁴ See 61 Fed. Reg. 9383, 9394 (Mar. 8, 1996).

¹⁵ See id. at 9394-95.

¹⁶ *Id*.

¹⁷ See id. at 9395.

¹⁸ *Id*.

Id. (citing Portland Cement Assoc. v. Ruckelshaus, 486 F.2d 375, 385-86 at n.42 (D.C. Cir. 1975); Essex Chemical Corp. v. Ruckelshaus, 486 F.2d 427, 439 (D.C. Cir. 1973)).

years later. ²⁰ FGD may be able to achieve industry's proposed MACT floor for mercury emissions – at least for sources burning certain coals – and thus is an option for achieving standards established for both rules. But a three-year compliance term for Utility MACT will likely preclude its use for compliance with that rule. As discussed above, installation of a FGD system requires 42 to 48 months, and landfill permitting may extend installation to 60 months or more. Unable to install FGD within three years in order to meet Utility MACT standards, sources would be forced to use ACI instead. Not only does the electric power generation sector have little experience with ACI, it is a wasteful option for sources that could comply using FGD: ACI ruins fly ash and, more importantly, sources burning high sulfur coal likely will be required to install FGD anyway two to five years later to comply with PM_{2.5} RTR, rendering the ACI installation superfluous and wasteful.

If EPA establishes a compliance window sufficient for sources to install FGD systems, EPA will encourage the use of that control technology to control mercury emissions. Sources that implement FGD to comply with Utility MACT will simultaneously be reducing SO₂ in compliance with PM_{2.5} RTR, thus sources will be achieving or exceeding EPA's environmental objectives at considerably lower cost. Were EPA to forego the cross-media benefits of FGD by imposing a rigid, three-year compliance window for Utility MACT, EPA arguably would be foregoing the implementation of the collective maximum achievable reduction of emissions in contravention of the CAA. Just as the less efficient alternative in the Pulp & Paper Cluster Rule rendered disbenefits such as the increased use of chlorinated chemicals, ACI as an alternative to FGD will cause disbenefits such as fly ash contamination and the increased need for landfills. Thus, ACI is arguably not MACT for sources for which FGD is a viable alternative.

In sum, a compliance deadline of longer than three years is warranted for existing sources.

C. EPA Has Authority Under § 112(n) Of The Clean Air Act To Set A Reasonable Compliance Deadline For Regulations Limiting HAP Emissions From Electricity Generators

For the reasons discussed above, a compliance deadline of longer than three years is reasonable and appropriate on public policy and pollution prevention grounds. Importantly, EPA has authority under the Clean Air Act to set a compliance deadline for regulated electricity generators that it deems reasonable. Because § 112(n) provides EPA with authority to promulgate emissions standards, EPA's authority to set an appropriate compliance deadline is limited neither by the three-year window mandated in § 112(i)(3)(A), the provision for a one-year extension in § 112(i)(3)(B), nor the provision for a Presidential exemption in § 112(i)(4). By including § 112(n) in the CAAA, Congress carved out a unique framework for the regulation of electricity generators. Congress determined that the more flexible framework of § 112(n) was warranted, in part, because of the "extremely high costs" to which electricity generators were subject under other provisions of the CAAA, such as the acid rain provisions, NO_x controls and

_

The PM_{2.5} RTR is expected to be proposed in Spring or Summer 2004 and finalized in 2005 or 2006. Given that PM_{2.5} RTR will require the installation of FGDs, EPA probably will require compliance within 4 to 6 years of the rule's promulgation.

 PM_{10} controls.²¹ Ultimately, by enacting § 112(n), Congress intended to avoid the "imposition of excessive and unnecessary costs on residential, industrial, and commercial consumers of electricity."²²

Congressional intent behind the meaning of § 112(n) is made clear by the legislative history of the CAAA. Representative Michael Oxley, a member of the conference committee tasked with reconciling the House and Senate versions of § 112, described the differences between the Senate and House bills in floor debate on the Conference Report to the CAAA:

The House provision required that the EPA Administrator perform a 3-year study of the hazards to public health reasonably anticipated to occur as a result of emissions by electric utility steam generating units and report the result of that study to Congress.

On the other hand, the Senate provision was the result of a complex, and ultimately unsatisfactory, set of negotiations. Unlike the House provision, scientific studies were not to serve as the basis for regulation, but simply were to be included in the docket of the regulatory process leading to regulations. Under the Senate provision, regulations for the control of particulates and mercury would have had to be promulgated no sooner or later than 5 years after enactment.

Rather than accept the Senate provision, the conference favored an approach that adopted the basic House provision The conferees agreed to the House provisions because of the logic of basing any decision to regulate on the results of scientific study and because of the emissions reductions that will be achieved and the extremely high costs that electricity generators will face under other provisions of the new Clean Air Act amendments.

136 Cong. Rec. at S12,934 (emphasis added).

Rep. Oxley proceeded to acknowledge that "the health risks from emissions of hazardous air pollutants from powerplants are vanishingly small, as EPA has repeatedly recognized." Accordingly, as between the House bill and the Senate bill, Congress essentially enacted the less stringent House version. The House version, as adopted by Congress, (i) permits EPA to regulate HAP emissions from power plants *only* if such regulation is warranted by scientific evidence and (ii) declines to impose a requirement that EPA promulgate regulations controlling particulates and mercury no sooner or later than 5 years after enactment.²⁴

Congress intended for § 112(n) to relieve electricity generators and their customers of the onerous burden of excessive and unnecessary costs that would otherwise be

²⁴ *Id*.

8

²¹ 136 Cong. Rec. S12,933, S12934 (daily ed. Oct. 26, 1990) (statement of Rep. Oxley).

²² *Id.* at S12934.

²³ *Id*.

imposed under the general framework of § 112. It would be anomalous, therefore, to conclude that Congress intended to contravene itself by forcing electricity generators into a rigid three year compliance deadline under § 112(i)(3)(A) when doing so would impose burdensome costs and threaten reliability as discussed below. That Congress declined to enact the Senate provision requiring mercury regulation to be completed within five years further supports the conclusion that Congress intended for EPA to regulate electricity generators more flexibly under § 112(n). For the same reasons, Congress could not have intended to constrain EPA's authority to grant extensions to the limited one-year extensions under § 112(i)(3)(B).

Thus, the language and legislative history of $\S 112(n)$ demonstrate that Congress intended to grant EPA to set a reasonable compliance deadline under Section 112(n). For the reasons discussed above, a compliance deadline of at least five years would be reasonable to harmonize the Utility MACT and PM_{2.5} RTR deadlines, to enable sources to adopt the most environmentally beneficial compliance strategies and to prevent extreme hardship to the industry caused by craft labor and materials shortages.

D. Alternatively, Precedent Exists For An Automatic, Global One-Year Compliance Extension.

Assuming for the sake of argument that EPA does not have the authority to set a compliance deadline for electricity generators that is reasonable due to the limitations imposed by $\S 112(i)(3)(A)$ of the CAA, at a minimum, EPA may grant a global one-year extension to electricity generators under $\S 112(i)(3)(B)$ because, as discussed above, more than three years is required for the installation of the MACT controls that are necessary for compliance with the MACT floor proposed for mercury emissions.

Section § 112(i)(3)(B) provides that EPA may "issue a permit that grants an extension permitting an existing source up to 1 additional year to comply with standards . . . if such additional period is necessary for the installation of controls." EPA has exercised this authority on a global basis when it has determined that an additional year was required for a majority of regulated sources to install controls. In Marine Tank MACT, EPA granted an automatic, global one-year compliance extension on grounds that it would have been practically impossible for regulated sources to comply with the newly promulgated standards within three years. In the preamble to the final rule, EPA noted that "[c]ommentators . . . stated that many sources would require more than 3 years to install the required control equipment." EPA granted the global extension because it agreed that "many MACT sources would probably require 1-year waivers if there was a 3-year compliance date for MACT sources in the final rule..." As EPA did then, EPA may do now. EPA may grant a global one-year extension for

²⁵ 42 U.S.C. § 7412(i)(3)(B).

²⁶ See 60 Fed. Reg. at 48392.

²⁷ See id.

²⁸ *Id.*

²⁹ *Id*.

compliance because many electricity generators will require more than three years to install the control technology necessary for compliance with Utility MACT standards.

E. Conclusion

We appreciate the opportunity to submit this white paper in support of the establishment of a compliance term for Utility MACT that exceeds three years, and in the alternative to grant an automatic, global one-year compliance extension.

A compliance term greater than three years is warranted because regulated electricity generators cannot, as a practical matter, install the control technologies that are necessary for compliance with the MACT standards proposed by industry groups. A compliance term greater than three years is further warranted due to the synergistic benefits of coordinating compliance with Utility MACT and soon-to-be-proposed PM_{2.5} RTR standards. By permitting sources extra time to install and implement FGD, a control technology that is effective at reducing both mercury and SO₂ emissions, EPA will achieve or exceed its environmental objectives for both standards at lower costs.

Based on the foregoing, industry urges EPA to establish a compliance deadline of at least five years pursuant to its authority under the unique framework of § 112(n), which was enacted by Congress, in part, to protect consumers of energy from excessive and unnecessary costs. Alternatively, industry urges EPA to grant a one-year extension under CAA § 112(i)(3)(B).